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Detection and characterization of novel polymorphisms using SSR and ISSR markers in sodium azide-induced salt tolerant wheat mutants

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Abstract

Salinity is one of the major abiotic constraints affecting crop production in dry-land and irrigated areas of the world. Reducing the spread of salinization and/or increasing the salt tolerance of high-yielding crops, are important global issues. Induced-mutagenesis is a powerful tool for crop improvement and it has been applied for the past 80 years to produce new mutant varieties in both seed and vegetatively propagated crops. Chemical mutagen, like sodium azide, frequently use for inducing genetic variability in plants. It creates point mutation and damages in chromosomes, so enhance tolerance in the plants for numerous adverse conditions. In this study, genetic variation increased through the application of chemical mutagens to somatic embryos for selecting salt-tolerant wheat mutants and characterization of them using molecular markers.

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Keywords: Chemical mutagenesis; Somatic embryogenesis; Molecular markers; Wheat

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